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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JONAS FROBERG OLSSON, MARTIN HESSLER, and
STEFANO SORRENTION¹

Appeal 2017-011543
Application 14/116,030
Technology Center 2400

Before CARL W. WHITEHEAD JR., JEFFREY S. SMITH and
JEREMY J. CURCURI, *Administrative Patent Judges*.

WHITEHEAD JR., *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants are appealing the final rejection of claims 32, 34–36, 43, 44, 46 and 59–63 under 35 U.S.C. § 134(a). Appeal Brief 1. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Introduction

The invention, “a method of uplink transmit power control performed in a wireless device of a radio communications system,” comprises “a wireless device and a radio network node of a radio communications

¹ According to Appellants, the real party in interest is Telefonaktiebolaget LM Ericsson. Appeal Brief 2.

system,” “a method performed by the radio network node for controlling a selection of a set of uplink transmission parameters by the wireless device” and “a method performed by the wireless device for selecting uplink transmission parameter sets.” Specification 1; Appeal Brief 3.

Illustrative Claim

59. A method of uplink transmit power control performed in a wireless device of a radio communications system, the method comprising:
maintaining mapping information that associates different settings of an uplink power control parameter with different resources of a physical downlink control channel region;
receiving a downlink control message on a resource of the physical downlink control channel region, the downlink control message being received from a first radio network node serving the wireless device in conjunction with a second radio network node;
using the mapping information to identify the setting of the uplink power control parameter that is associated with the resource on which the downlink control message was received; and
transmitting an uplink message for the second radio network node, using an uplink transmission power determined in dependence on the identified setting of the uplink power control parameter.

Rejections on Appeal

Claims 32, 36, 44, 59 and 61–63 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pelletier (US Patent Application Publication 2011/0134774 A1; published June 9, 2011) and Shin (US Patent Application Publication 2011/0038271 A1; published February 17, 2011).
Final Action 2–15.

Claim 60 stands rejected under 35 U.S.C. § 103 as being unpatentable over Pelletier, Shin and Aiba (US Patent Application Publication 2013/0034073 A1; published February 7, 2013). Final Action 15–17.

Claims 34, 35, 43 and 46 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pelletier, Shin and Lee (US Patent Application Publication 2013/0194931 A1; published August 1, 2013). Final Action 17–24.

ANALYSIS

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (filed April 10, 2017), the Reply Brief (filed September 14, 2017), the Answer (mailed July 14, 2017) and the Final Action (mailed September 9, 2016) for the respective details.

The Specification discloses, “Even though QCL [Quasi Co-location] assumptions respect the NW [network] transparency principle described above, they implicitly enable UEs to receive signals from different TPs [transmission points] on **different ports or resources.**” Specification page 3, lines 5–7 (*emphasis added*). The Specification further discloses, “The proposed scheme uses associations or mappings between two or more UL transmission parameter sets and **resources such as** ePDCCH PRB [physical resource blocks] sets in one ePDCCH region.” Specification page 9, lines 28–30 (*emphasis added*). The Specification also discloses, “The parameters in the UL transmission parameter sets determine physical layer characteristics for the transmission of an UL message, and/or a content of the UL message when the parameters are applied” and “**Selecting an UL transmission parameter set based on the resource(s), e.g. the ePDCCH PRB set**, used by the received DL control message, and based on the

mapping obtained” from “the resources of the control channel region to specific UL transmission parameters sets.” Specification 11, lines 4–6 (*emphasis added*), Specification 10, line 23–24, respectively.

Appellants contend that, “[A]rguing that Pelletier substantially discloses the claimed method of uplink power control except for not maintaining and using mapping information is contradictory on its face” because the “[P]ower control in claim 59 *integrally* relies on a wireless device using mapping information to identify the setting to be used for an uplink power control parameter” and therefore “without the mapping, there is no basis for setting the uplink power control parameter used by the wireless device for transmitting to the second radio network node.” Appeal Brief 9.

The Examiner determines, “as per instant specification, the mapping information is derived from downlink control message and broadcast information received from the network nodes, and can be interpreted to be directed to an association between parameters and channels.” Answer 4. The Examiner further determines that “the combination of Pelletier and Shin in same field of endeavor discloses as the UL CC (e.g., paired) to the DL CC on which the control signaling was received in Palletier and L1 CC indicator in the PDCCH is used so that the WTRU knows which TPC commands applies to each UL CC in Shin.” Answer 8.

Appellants contend:

In the context of claims 59 and 62, a wireless device receives a downlink control message from a first radio network node that is serving the wireless device in conjunction with a second radio network node. The device receives the downlink control message on a resource of a downlink physical control channel region and it uses ‘mapping information’ to identify the setting of an uplink

power control parameter **that is associated with the resource on which the downlink control message was received.** In turn, the device transmits an uplink message for the second radio network node using an uplink transmission power determined in dependence on the identified setting of the uplink power control parameter. **According to claims 59 and 62, the mapping information maintained by the device associates different settings of the uplink power control parameter with different resources of the physical downlink control channel region.**

Reply Brief 3 (*emphasis added*).

It is noted that neither claim 59 nor claim 62 specifies the *type of resource* on which the download control message was received. However, we still find Appellants' arguments persuasive of Examiner error because Shin does not address the noted deficiency of Pelletier. Shin discloses, "A method and apparatus for determining uplink power in a wireless transmit receive unit (WTRU)" and that this may "include the WTRU receiving a plurality of uplink power parameters indexed to one of a plurality of uplink carriers and receiving a transmit power control command indexed to the one of the plurality of uplink carriers." Shin ¶5. Shin does not disclose different resources in the downlink control channel region are mapped to different settings of the power control parameter as required in independent claims 59 and 62. Accordingly, we reverse the Examiner obviousness rejection of independent claims 59 and 62, as well as, the obviousness rejections of dependent claims 34–36, 43, 44, 46, 59–61 and 63.

DECISION

The Examiner's 35 U.S.C. § 103 rejections of claims 32, 34–36, 43, 44, 46 and 59–63 are reversed.

Appeal 2017-011543
Application 14/116,030

REVERSED